



The Internet of Things

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OUTLINE

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2. Introduction
3. Some proofs
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ELCA

Presentation

ELCA is one of the largest information technology companies in Switzerland, and a leader in the fields of **software development, systems integration, business consulting and applications management.**

- **Founded:** 1968 as electro-calcul for the software navigation of the Grand Dixence Dam
- **Employees:** Over 700 employees, mostly highly skilled (IT) professionals with university degrees
- **Offices:** Lausanne (headquarters), Zurich, Geneva, Bern, Madrid, Paris, Ho Chi Minh City (Vietnam)
- **Turnover:** More than CHF 100 million in 2014
- **Quality Standards:** ISO 9001 (since 1993), ISO 14001 (since 2011), CMMI level 3 (since 2007)
- **Project Experience:** > 1000 customer projects in ten years
- **Awards:**



ELCA

Business intelligence and Big Data

More than **50 collaborators** specialized in BI (ZH-BE-LS-GE)

- Elicitation of needs, support, training...
- Extraction, transformation, consolidation or migration of Data
- Modeling and implementing of Databases
- Implementing of standard reporting, ad-hoc reporting and dashboard
- Handling of unstructured data
- Social Media and/or Web data extraction
- Advanced analysis (Text processing, Predictive analysis, graph analysis, GIS, Search Engine...)
- Implementation of Big Data Projects

IOT

Introduction

Aujourd'hui 99% des objets ne sont actuellement pas connectés



Objets connectés par personne (Prévisions Cisco)

2003

0,08

Population Mondiale
6,3 Milliards
Objets connectés
500 Millions



2010

1,84

Population Mondiale
6,8 Milliards
Objets connectés
12,5 Milliards



2015

3,47

Population Mondiale
7,2 Milliards
Objets connectés
25 Milliards



2020

6,58

Population Mondiale
7,6 Milliards
Objets connectés
50 Milliards



BIG DATA VS IOT

Big data = Volume and/or Variety and/or Velocity

Gigabytes or Terabytes of data

Sometimes without internet connection

Access to data remains limited

Smoke in, smoke out -> you still need to know your business

Big Data

The Internet of Things

Big data = Volume and Variety and Velocity

Petabytes of data

Internet connection

Data will be more accessible

Smoke in, smoke out -> you still need to know your business

IOT

Industry sectors from now to 2020



Health x6



Production x4



Transport x5

IOT

Challenges



PREDICTIVE MAINTENANCE OF NETWORK

Priority 1 : Security

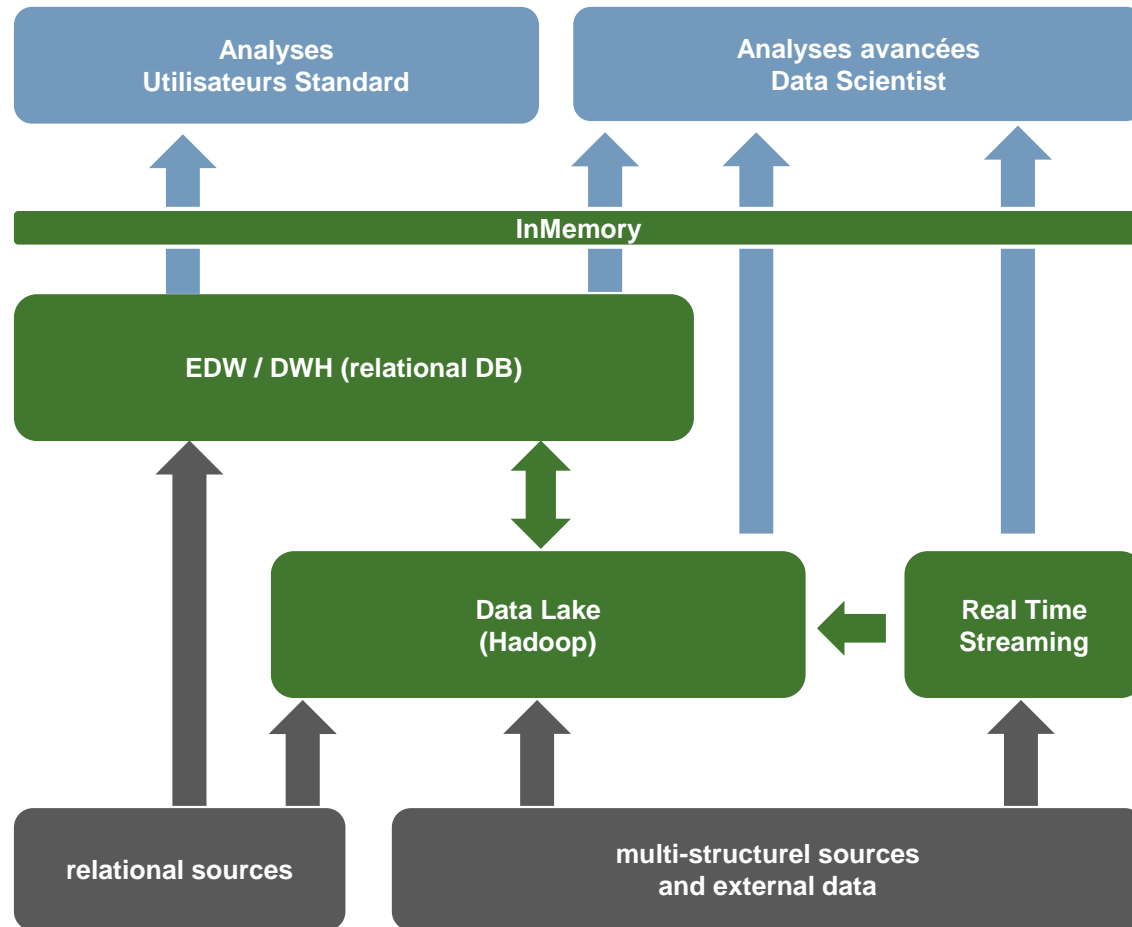


PREDICTIVE MAINTENANCE OF DOORS

Open or Late



IOT Architecture



THE BIG DATA «STACK»

Business

Banking	Insurance	Health	Public Sector & Government	Service provider	Space & Defense	International Organizations
Transport & Infrastructure	Industry & Manufacturing	Events, Culture & Sports	Utilities & Energy	Retail	Pharma & Life Science	

Services

Question answering	Automatic translation	Spoken language understanding	Automatic classification	Named entity recognition	Complex event processing	Predictive analytics
Keyphrase extraction	GIS & Geocoding	Image processing	Relation extraction	Sentiment analysis	Data strategy	Data integration

Software

Search engines	ML/Statistical packages	Big data algorithms				
NLP toolkits	Graph analysis	Web crawling				

Platform

Databases (RDB/noSql)	Distributed file systems	IoT				
Big data on wheels	Big data platforms	Cloud	In-Memory			

Data

CRM	Internal documents	Web pages	Log files	Sensor		
ERP	Social networks	Blogs	Weather	Google Tools		

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THE INTERNET OF THINGS

Conclusion

Don't need:

- massive Data
- massive Investment
- massive Commitment

Start NOW !



JBerthier

Thank you.

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